
**APPARATUS AND METHOD FOR AUTOMATICALLY SENSING
THRESHOLD HISTOGRAM WITH DIFFERENTIATION OF
SINUS FROM ECTOPIC BEATS**

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Abstract of the Invention

10 An implantable programmable cardiac stimulation device and
associated method for differentiating between normal sinus events and
ectopic beats. The stimulation device monitors the sensing thresholds of
sinus and non-sinus cardiac events, and stores a history of these sensing
thresholds along with temporal data for accurate event detection. The
stimulation device further provides accurate and appropriate detection of
15 sensed events including P-waves, non-conducted PACs, and conducted
PACs and thus verifies correct detection of PVCs and R-waves.
Furthermore, the present invention provides a history record of ectopic
events, distinguished by sensing thresholds and timing intervals, giving a
valuable diagnostic tool to the physician in optimizing rhythm
20 management therapy. In addition, the stimulation device allows the
sensitivity threshold to be set based on a single cardiac cycle and past
history.